

På vei mot et bærekraftig kostnadsnivå

Orkangerkonferansen

**R. Rasmus Sunde,
Orkanger, 26 mai, 2016**

FORSYS
SUBSEA

CONCEPT, DELIVERY AND BEYOND

An FMC Technologies and Technip Company

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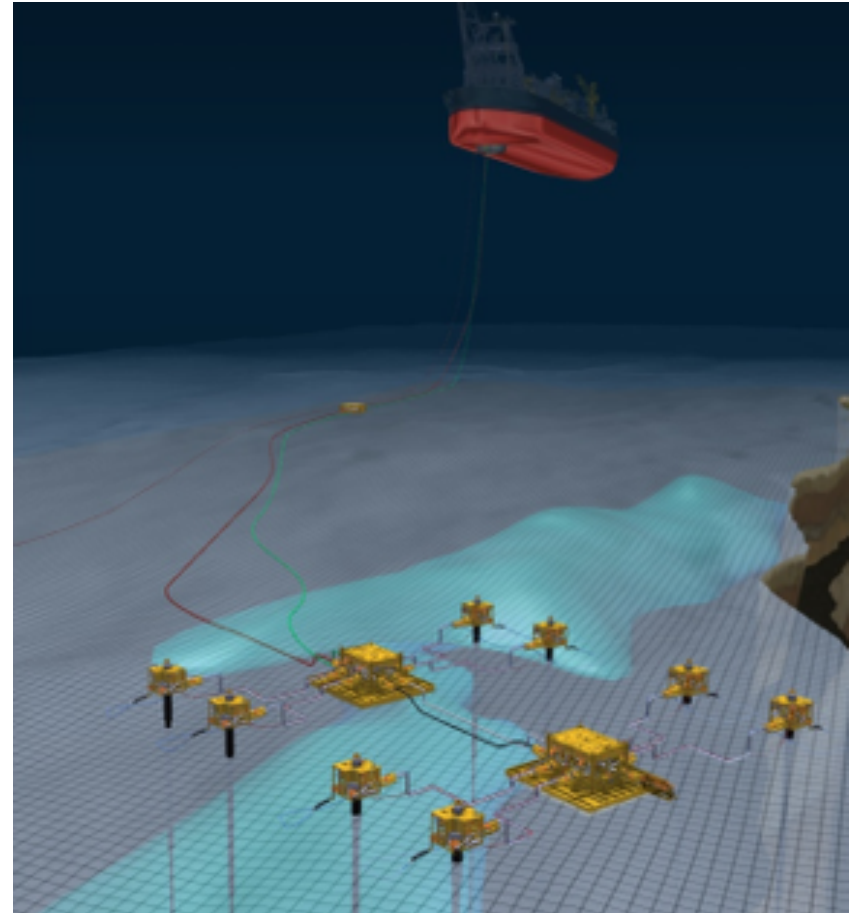
We are at a cross road



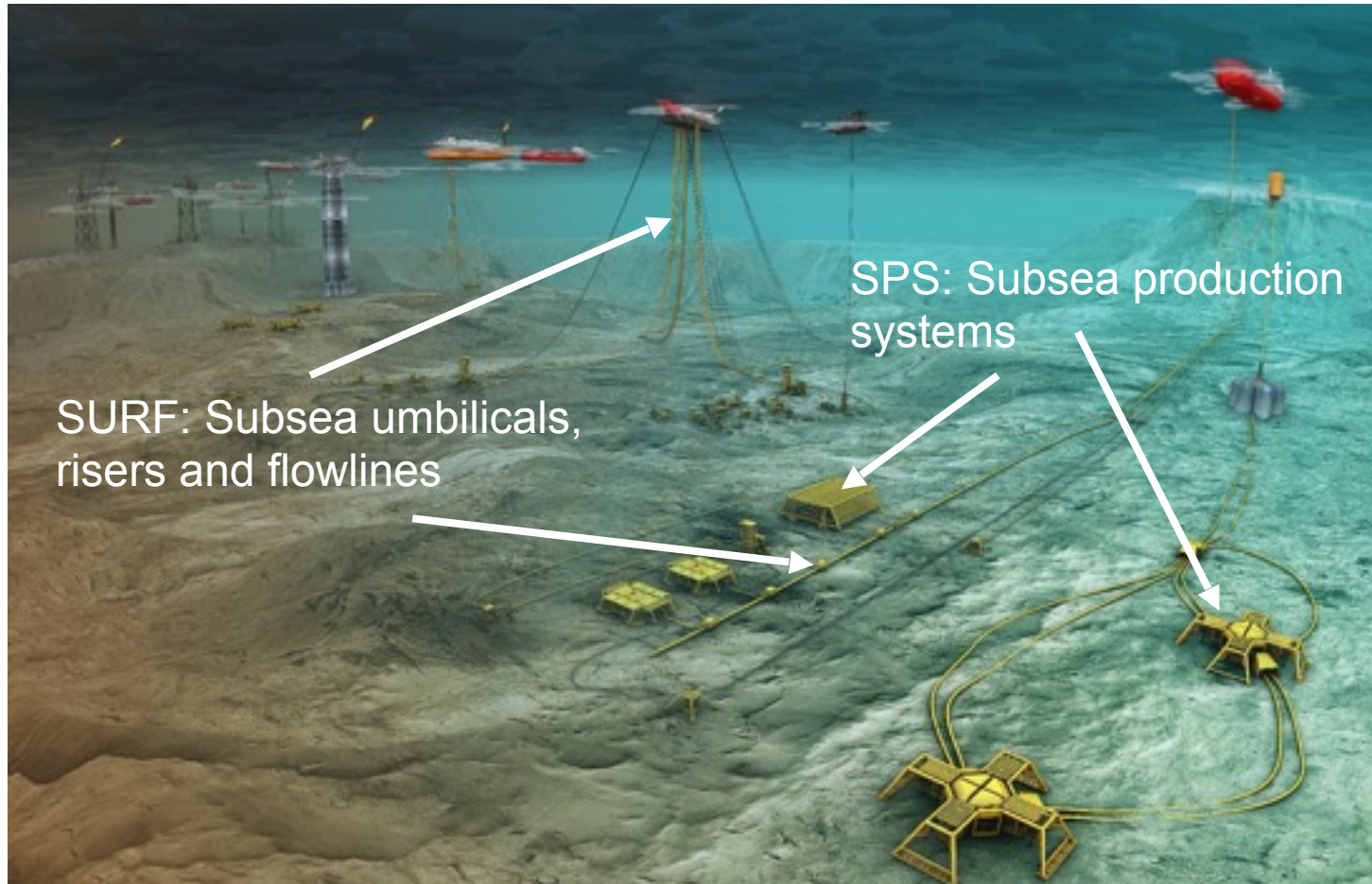
"We can't solve problems by using the same kind of thinking we used when we created them."

Albert Einstein

- The Subsea cost challenge
- Addressing the cost challenge through
 - Concept
 - Delivery and
 - Beyond
- Summing Up

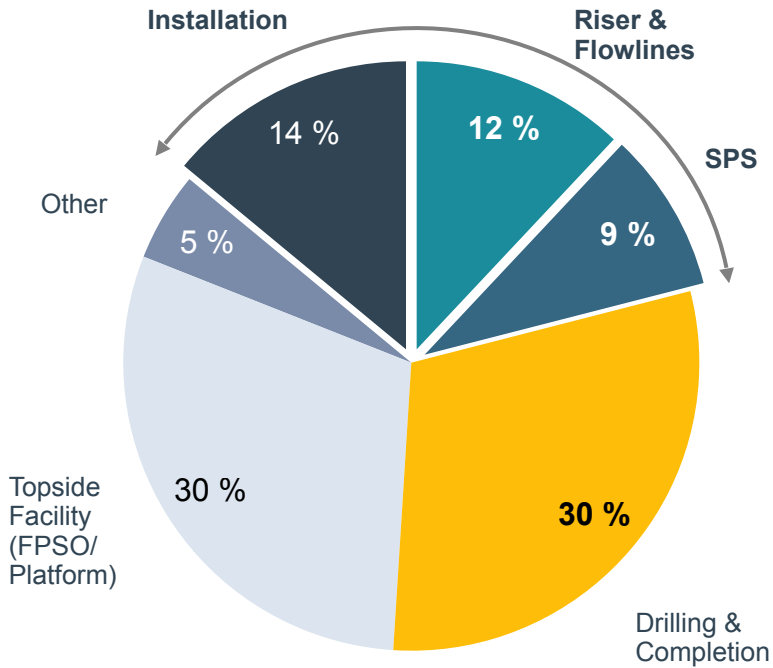


What are we talking about?

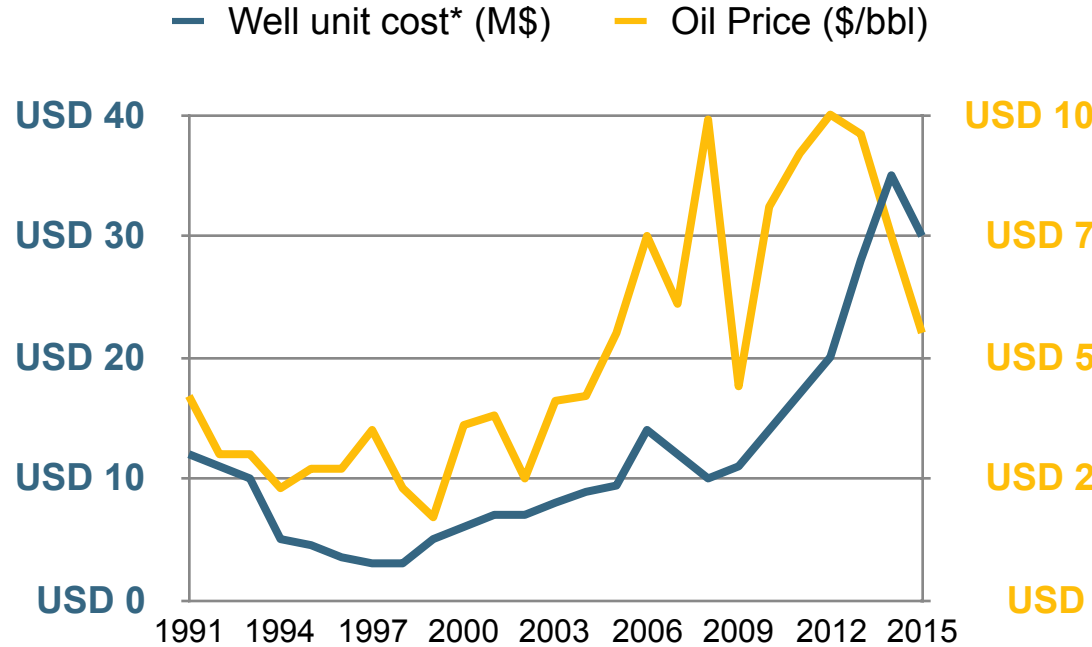


All about Costs!

Non-sustainable cost trends over the last decade



**Cost Distribution
Offshore Development (Typical Greenfield)**



* Subsea Production System cost only

Source: internal FMC Technologies estimates

Responding from Concept to Delivery and Beyond

The Alliance (FMC, Forsys, Technip) - an enabler to reduce costs

or SURF & SPS Integra



FMC Technologies

Subsea Production Systems
Subsea Separation and Boosting
Systems
Control and Automation Systems
Subsea Well Intervention
Subsea Services



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Field Architecture
Flow Assurance
Front-end studies
Life of Field Surveillance
Joint R&D



Technip

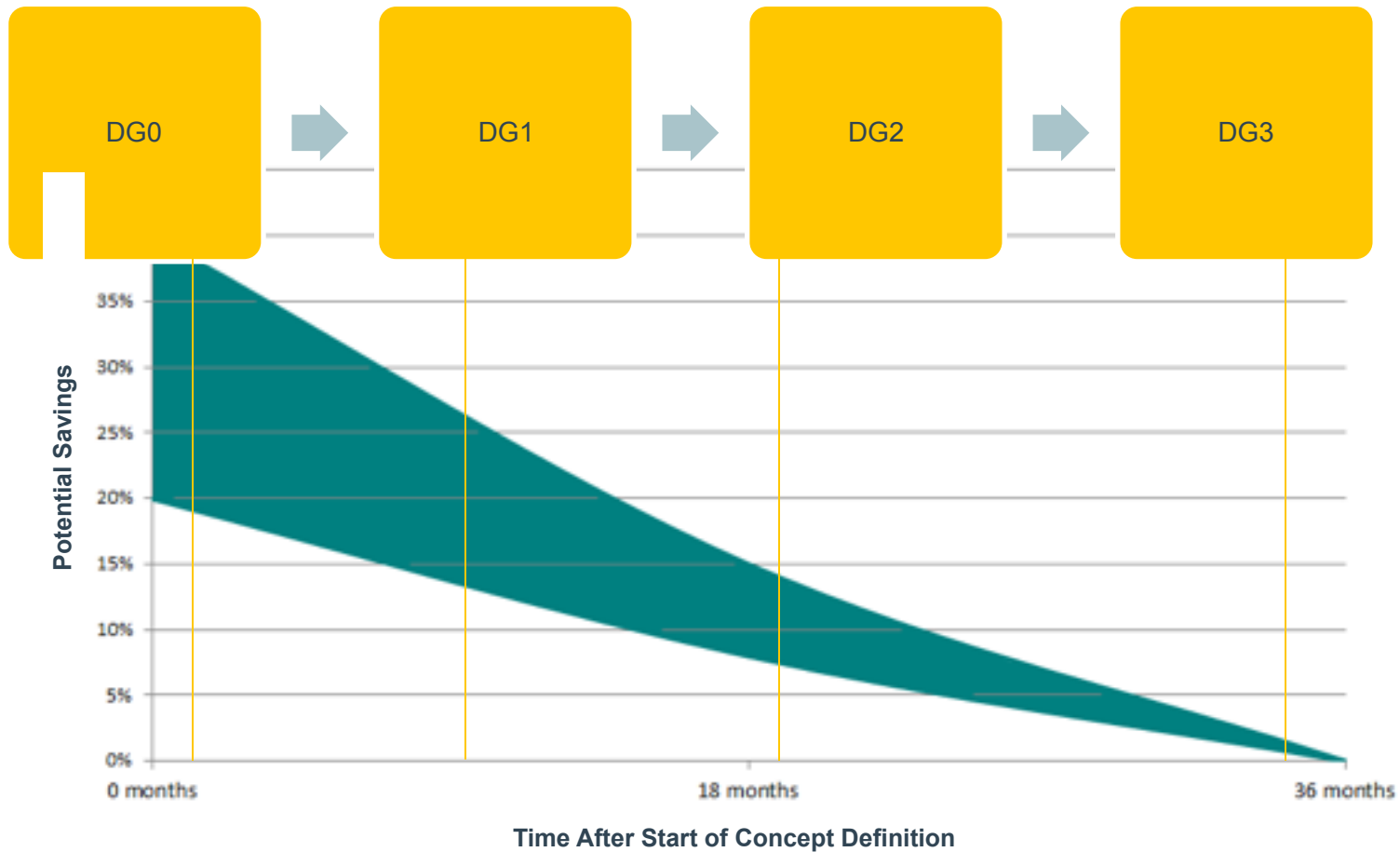
Flexible Flowlines
Umbilicals
Pipeline/Flowline/Jumper
Installation
Subsea Equipment Installation
Platform design, fabrication,
installation
Topsides design and fabrication

What the Alliance offers through Forsys Subsea?

- **Optimized subsea architecture**
- **Reduced contractual risks**
- **Mitigated project risks**
- **Reduced time to first oil**
- **Improved robustness of overall planning through early identification of critical interfaces and long lead items**
- **Optimized offshore installation campaigns**
- **Improved performance over the life of field**
- **Joint SPS+SURF R&D and technology application for increased value creation**
-
-

The Value of Early Involvement

Rationalize overall field layout, drive standards, development and integration of technology



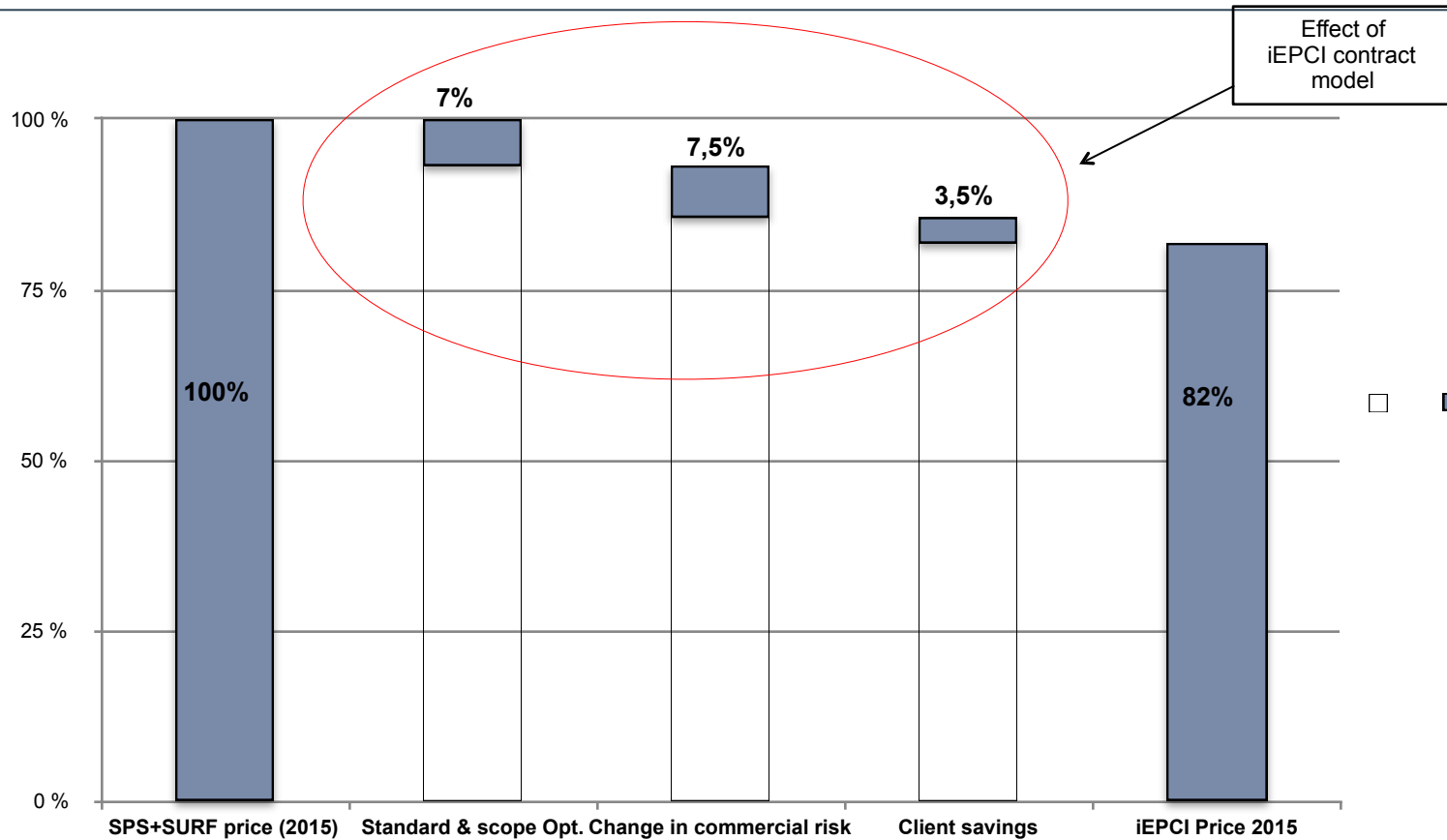
Subsea Tree Parts

viewpoint: 1/6



Identified and possible effects through integrated approach

GoM case

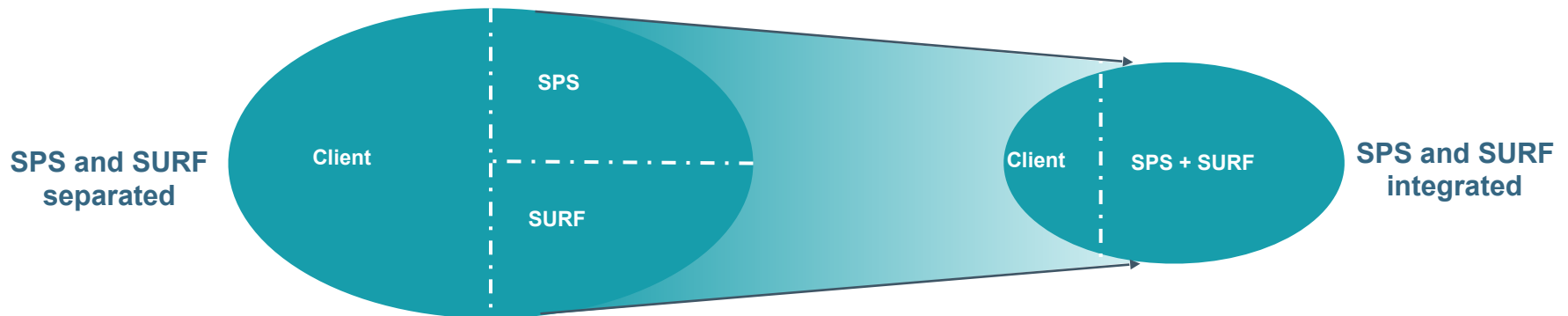


~18% price reduction – on a very mature case

Risk Management and integrated execution (iEPCI)

Mitigation and re-distribution of risks between Client and EPCI contractor

Project risk distribution



- Mitigation of project risk
 - Early involvement of Alliance addressing criticality of technical interfaces and planning of offshore activities
 - Alignment of commercial incentives on contractor side means reduced risks to Client
 - Knock-on effect of delay in scope eliminated/absorbed by contractor
- Redistribution of remaining project risks between Client and EPCI contractor

Orkangerkonferansen - Oppsummering

På vei mot et bærekraftig kostnadsnivå

- Cost level in Subsea unsustainable
- Significant cost reduction potential exist
 - Industrialization
 - Standardization
 - Technology
 - New collaborative models
 - Surveillance advisory services
- Forsys Subsea and its parents Technip and FMC are eager to demonstrate its value proposition through improving industry returns by by Reshaping the way Subsea Fields are Designed, Delivered and Operated, for Life



Thank you

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